

REMARKS

The Rejections under 35 USC 112, second paragraph

Claim 1 is amended to recite the specific heteroaryls from claim 16 at each occurrence. Claim 16 is simultaneously cancelled. Applicants however disagree with the Examiner for reasons of record. One of skill in the art based on the disclosure would not find the "heteroaryl" term indefinite.

The allegedly indefinite term "contains" appearing at several places in the context of listing heteroatoms in claim 1 is replaced by "has."

"B" is changed to "Y" in order to prevent the possible alleged confusion regarding "B" being possibly understood to mean boron.

Applicants bring to the attention of the Examiner to a mistake in now cancelled claim 16. Claim 16 erroneously listed species of both heteroaryls and saturated heterocycles under the common name of heteroaryls. For a list for each group in the specification please see page 8. The currently amended claims do not contain this mistake.

Furthermore, during the previous reply, claim 1 was by mistake amended to narrow the definitions of R^2 to R^5 to H and of R^6 to methyl. The definitions are restored. However in view of the section 112 rejections to other parts of the claim, the term heteroaryl is amended as at other locations in the claim as discussed above. The present scope of the claims has been Examined as evidenced by the Office Action of February 19, 2002. No new searching burden is placed on the Examiner by the restoration of the claim to its proper scope. Applicant are very sorry for any inconvenience this may cause the Examiner.

The rejections over claim 6 should be overcome by the restoration of the definitions of R^1 and R^2 together. The $-(CHR^9)_n-NR^7-A-NR^8-Y$ group can attach to any member of the ring.

The Rejections under 35 USC 112, first paragraph

The section 112, first paragraph, rejections are overcome by the amendment to claim 1 by reciting the specific heteroaryls from claim 16 at each occurrence. Applicants however disagree with the Examiner for reasons of record. One of skill in the art based on the disclosure would have understood the scope of the claim and would have been fully able to practice the invention without undue experimentation.

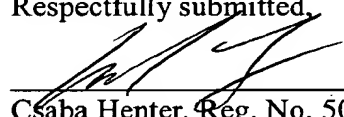
Information Disclosure Statement

Applicants thank the Examiner for bringing the proviso to applicant's attention. Upon review, it appears that the source of the proviso, US 6,365,736, is not of record in the present application. An IDS is filed.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "**Version With Markings To Show Changes Made**".

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



Csaba Henter, Reg. No. 50,908
Anthony J. Zelano, Reg. No. 27,969
Attorneys for Applicant(s)

MILLEN, WHITE, ZELANO
& BRANIGAN, P.C.
Arlington Courthouse Plaza 1, Suite 1400
2200 Clarendon Boulevard
Arlington, Virginia 22201
Telephone: (703) 243-6333
Facsimile: (703) 243-6410
Attorney Docket No.: SCH-1714A

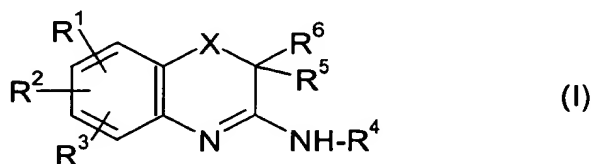
Date: October 17, 2002
AJZ/CH/pdr/K:\Sch\1706\Reply oct 2002.doc

Version With Markings To Show Changes Made

In the Claims

The claims have been amended as follows:

1. (Twice Amended) A compound of Formula I, or a tautomeric or isomeric form or a salt of a compound of Formula I,



wherein

X is O,

R¹ is $-(\text{CHR}^9)_n\text{-NR}^7\text{-A-NR}^8\text{-B}-(\text{CHR}^9)_n\text{-NR}^7\text{-A-NR}^8\text{-Y}$,

R², R³, R⁴ and R⁵ are hydrogen,

R⁶ is methyl,

R² is hydrogen, or

R¹ and R² together with two adjacent carbon atoms form a 5-, 6-, 7- or 8-membered ring,

which is monocyclic or bicyclic, saturated or unsaturated and in which 1 or 2 CH₂

groups can be replaced by oxygen or carbonyl, and which is substituted with

$(\text{CHR}^9)_r\text{-NR}^7\text{-A-NR}^8\text{-Y}$, and is optionally substituted with C₁₋₄ alkyl,

R³ is hydrogen, halogen, NO₂, cyano, CF₃, -OCF₃, -S-R⁹, -O-R⁹, C₃₋₇ cycloalkyl,

-NR⁹-C(=NR¹⁰)-R¹¹, -NH-CS-NR¹²R¹³, -NH-CO-NR¹²R¹³, -CO-R¹⁴, NR¹⁵R¹⁶,

C₆₋₁₀ aryl, which optionally is substituted with halogen, cyano, C₁₋₄ alkyl, -S-R⁹, or

-O-R⁹, or is thienyl, imidazole, indole, isooxazole, isothiazole, furan, oxadiazole,

oxazole, pyrazine, pyridazine, pyrimidine, pyridine, pyrazole, pyrrole, tetrazole,

thiazole, triazole, thiophene, thiadiazole, benzimidazole, benzofuran,

benzoxazole, isoquinoline, quinoline, 2-C₁₋₆ alkyl-3-amino-1,4-benzoxazine, or is

2-C₁₋₆-alkyl-3-keto-1,4-benzoxazine, or a C₁₋₆ alkyl, which is optionally

substituted with halogen, -OR⁹, -SR⁹, -NR¹²R¹³, =NR¹², =NOC₁₋₆ alkyl, =N-

NHaryl, phenyl, C₃₋₇ cycloalkyl or with thienyl, imidazole, indole, isooxazole,

- isothiazole, furan, oxadiazole, oxazole, pyrazine, pyridazine, pyrimidine, pyridine, pyrazole, pyrrole, tetrazole, thiazole, triazole, thiophene, thiadiazole, benzimidazole, benzofuran, benzoxazole, isoquinoline, quinoline, or is a C₂₋₆ alkynyl, which is optionally substituted with halogen, CONH₂, C≡N or phenyl,
- R⁴ is hydrogen or acyl,
- R⁵ and R⁶, independently of one another, are hydrogen, C₃₋₇ cycloalkyl, phenyl, C₁₋₆ alkyl, C₂₋₆ alkenyl or C₂₋₆ alkynyl radicals, which are optionally and independently
- of one another substituted with halogen, OH, O-C₁₋₆ alkyl, SH, S-C₁₋₆ alkyl, NR¹⁵R¹⁶, thienyl, imidazole, indole, isooxazole, isothiazole, furan, oxadiazole, oxazole, pyrazine, pyridazine, pyrimidine, pyridine, pyrazole, pyrrole, tetrazole, thiazole, triazole, thiophene, thiadiazole, benzimidazole, benzofuran, benzoxazole, isoquinoline, quinoline, phenyl or C₃₋₇ cycloalkyl,
- R⁷ is hydrogen, C₁₋₆ alkyl, which is optionally substituted with phenyl, COOC₁₋₆ alkyl or CO-C₁₋₆ alkyl,
- R⁸ is hydrogen, C₁₋₆ alkyl, which is optionally substituted with phenyl, COOC₁₋₆ alkyl or COC₁₋₆ alkyl,
- A is a straight-chain or branched C₁₋₆ alkylene, straight-chain or branched C₁₋₆ alkenylene or -(CH₂)_p-Q-(CH₂)_q-,
- B Y is hydrogen or -(CH₂)_p-U,
- Q is C₃₋₇ cycloalkyl, indanyl, 5-, 6- or 7-membered saturated heterocycloalkyl with 1-2 N, O or S atoms, C₆-C₁₀ aryl or ~~5- or 6-membered heteroaryl with 1-3 N, O or S atoms, which is optionally anellated with benzene~~ thienyl, imidazole, indole, isooxazole, isothiazole, furan, oxadiazole, oxazole, pyrazine, pyridazine, pyrimidine, pyridine, pyrazole, pyrrole, tetrazole, thiazole, triazole, thiophene, thiadiazole, benzimidazole, benzofuran, benzoxazole, isoquinoline, quinoline, 2-C₁₋₆ alkyl-3-amino-1,4-benzoxazine, or 2-C₁₋₆ alkyl-3-keto-1,4-benzoxazine,
- U is hydrogen, C₁₋₆ alkyl optionally substituted with halogen, C₃₋₇ cycloalkyl, indanyl, C₇₋₁₀ bicycloalkyl, C₆₋₁₀ aryl or ~~5- or 6-membered heteroaryl with 1-3 N, O or S atoms, which is optionally anellated with benzene~~ thienyl, imidazole, indole, isooxazole, isothiazole, furan, oxadiazole, oxazole, pyrazine, pyridazine, pyrimidine, pyridine, pyrazole, pyrrole, tetrazole, thiazole, triazole, thiophene,

thiadiazole, benzimidazole, benzofuran, benzoxazole, isoquinoline, quinoline, 2-C₁₋₆ alkyl-3-amino-1,4-benzoxazine, or 2-C₁₋₆-alkyl-3-keto-1,4-benzoxazine, wherein the aryl or heteroaryl radical thienyl, imidazole, indole, isooxazole, isothiazole, furan, oxadiazole, oxazole, pyrazine, pyridazine, pyrimidine, pyridine, pyrazole, pyrrole, tetrazole, thiazole, triazole, thiophene, thiadiazole, benzimidazole, benzofuran, benzoxazole, isoquinoline, quinoline, 2-C₁₋₆ alkyl-3-amino-1,4-benzoxazine, or 2-C₁₋₆-alkyl-3-keto-1,4-benzoxazine, is optionally substituted with halogen, C₁₋₄ alkyl, C₁₋₄ alkoxy, CF₃, NO₂, NH₂, N(C₁₋₄ alkyl)₂, cyano, CONH₂, -O-CH₂-O-, -O-(CH₂)₂-O-, SO₂NH₂, OH, phenoxy or COOC₁₋₄ alkyl,

R⁸ and B Y together with the nitrogen atom optionally form a 5- to 7-membered saturated heterocycle, which optionally ~~contains~~ has another oxygen, nitrogen or sulfur atom and is optionally substituted with C₁₋₄ alkyl, phenyl, benzyl or benzoyl or form an unsaturated 5-membered heterocycle, which optionally ~~contains~~ has 1-3 N atoms and is optionally substituted with phenyl, C₁₋₄ alkyl or halogen,

R⁷ and A together with the nitrogen atom optionally form a 5- to 7-membered saturated heterocycle, which optionally ~~contains~~ has another oxygen, nitrogen or sulfur atom or ~~forms~~ form an unsaturated 5-membered heterocycle, which optionally ~~contains~~ has 1-3 N atoms,

m is 0, 1 or 2,

n and r is 0, 1 to 6,

p and q is 0 to 6,

R⁹ and R¹⁰ is hydrogen or C₁₋₆ alkyl,

R¹¹ is C₁₋₆ alkyl, -NH₂, -NH-CH₃, -NH-CN, C₆₋₁₀ aryl optionally substituted with halogen, C₁₋₄ alkyl or CF₃, or ~~5- or 6-membered heteroaryl with 1 to 4 nitrogen, sulfur or oxygen atoms that is optionally an unsubstituted or substituted~~ with halogen, C₁₋₄ alkyl or CF₃, group selected from the group consisting of thienyl, imidazole, indole, isooxazole, isothiazole, furan, oxadiazole, oxazole, pyrazine, pyridazine, pyrimidine, pyridine, pyrazole, pyrrole, tetrazole, thiazole, triazole, thiophene, thiadiazole, benzimidazole, benzofuran, benzoxazole,

isoquinoline, quinoline, 2-C₁₋₆ alkyl-3-amino-1,4-benzoxazine, and 2-C₁₋₆-alkyl-3-keto-1,4-benzoxazine,

- R¹² and R¹³ are hydrogen, C₁₋₆, alkyl, phenyl optionally substituted with halogen or C₁₋₄ alkyl, benzyl optionally substituted with halogen or C₁₋₄ alkyl, or C₃₋₇ cycloalkyl,
- R¹⁴ is hydrogen, hydroxy, C₁₋₆ alkoxy, phenyl, C₁₋₆ alkyl optionally substituted with CO₂H, CO₂C₁₋₆ alkyl, hydroxy, C₁₋₄ alkoxy, halogen, NR¹⁵R¹⁶, CONR¹²R¹³, phenyl, or C₂₋₆ alkenyl optionally substituted with phenyl, cyano, CONR¹²R¹³ or CO₂C₁₋₄ alkyl,
- R¹⁵ and R¹⁶ are hydrogen, C₁₋₆ alkyl, phenyl or benzyl, and
- R¹⁵ and R¹⁶ together with the nitrogen atom optionally form a saturated 5-, 6-, or 7-membered ring, which optionally ~~contains~~ has another nitrogen, oxygen or sulfur atom and is optionally substituted with C₁₋₄ alkyl, phenyl, benzyl or benzoyl,

wherein when R⁶ is methyl and R², R³, R⁴ and R⁵ are hydrogen, R¹ is not 6-((4-aminobenzyl)aminomethyl), 6-((4-dimethylaminobenzyl)aminomethyl), 6-((4-aminobenzyl) (tert-butyloxycarbonyl)aminomethyl), or 6-((4-dimethylaminobenzyl) (tert-butyloxycarbonyl)aminomethyl).

6. (Three Times Amended) A compound according to claim 1, wherein R¹ and R² together with two adjacent carbon atoms form a the 3- to 8-membered ring; that is substituted with ~~-(CHR⁹)_r-NR⁷-A-NR⁸B~~ -(CHR⁹)_r-NR⁷-A-NR⁸Y.

Claims 19-22 have been newly added.